

REMARKS

Status

In the Office Action mailed November 12, 2009, Claims 1-4, 6-10, and 19-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7, 009,995, issued to Bohrer et al. ("*Bohrer*") in view of U.S. Patent No. 7,277,675, issued to Lohr et al. ("*Lohr*"); and, Claims 5 and 11-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bohrer* in view of *Lohr* as applied in Claims 1 or 10 and further in view of U.S. Patent No. 4,766,547, issued to Modery et al. ("*Modery*").

By this reply, Claim 1 has been amended and no claims have been added or canceled. As such, Claims 1-22 are pending in this application.

Claim Rejections

The Examiner declares that *Bohrer* fails to disclose each and every element of Applicant's claims—in particular, independent Claims 1 and 18—and therefore relies on *Lohr* to compensate for the shortcomings of *Bohrer*. *Lohr* however fails to disclose at least two subscribers each including a transmission/reception head. That is, if one identifies the transmitters and the receivers of *Lohr* (cf, column 4, lines 20 to 23) with the at least two subscribers as claimed, it turns out that the transmitter of *Lohr* is only capable of transmitting, and the receivers are only capable of receiving data; and thus there is no bidirectional communication possible, i.e., the receivers E2, E2, and E4 cannot transmit data to the transmitter comprising the AC voltage source 1.

Furthermore, *Lohr* fails to disclose an amplifier that receives electrical signals that have been transmitted inductively onto the data line by the at least two subscribers and couples them back into the data line after the amplification, wherein the amplifier is DC-connected to the data line. In this regard, the Examiner vaguely refers to an aspect of *Lohr* where "the inductive transmission elements are completed by appropriate capacitances connected in series to form parallel resonance circuits." But the formation of resonance circuits does not provide for any amplification of electrical signals as claimed. Forming parallel resonance circuits merely ensures that elements become as efficient as possible, but this cannot be referred to as "amplification" because no energy is added. In other words, reducing damping losses is not amplification.

Additionally, the Examiner has failed to clearly identify the claimed "data line" with any

of the elements disclosed by *Lohr*. At most, a data line could be identified with the electrical lines of the transmitter that are connected in parallel to the primary windings 2, 3, 4, because only these lines could form a data line of some kind of serial databus. Even if the receivers E1 - E4 were capable of transmitting data—which they are not—there would still be no amplifier as claimed, which receives such electrical data, amplifies it, and then couples it back onto these lines.

Further in regard to independent method Claim 18, particularly the reception step, the Examiner refers to figure 5 of *Lohr*, but it is not clear to the Applicant how this circuitry on the receiver side provides any amplification. Again, providing a resonance circuit does not imply the amplification of any received signals, but only improves the strength of the received signal. And reducing damping losses is not equivalent to amplification. With respect to Claim 18's remaining steps, Applicant asserts that the Examiner has failed to identify any corresponding steps in *Lohr*, but instead has simply recited various passages. Such a rationale is inadequate, and Applicant requests that the Examiner provide sufficient grounds as to *Lohr's* alleged disclosure of Applicant's claimed elements.

Based on at least the above reasoning, Applicant submits that *Bohrer* and *Lohr*, alone or in combination, fail to disclose, teach, or suggest each and every element of Applicant's claimed invention—namely, independent Claims 1 and 18. In addition, the remaining relied upon prior art references fail to compensate for the shortcomings of *Bohrer* and *Lohr* to do so. As such, Applicant submits that Claims 1 and 18—as well as all claims ultimately depending there from—are in condition for allowance and respectfully requests that the rejections be removed and the application be passed to issuance.

Although Claims 7, 9, and 10 are also allowable based on their ultimate respective dependency on allowable Claim 1, Applicant herein provides additional bases for their allowance.

For Claim 7, Examiner refers to a passage of *Bohrer* in column 2. The values indicated in this passage however refer to the SERCOS interface that is implemented in a digital serial field bus system, which does not have multi-master subscribers, but only one master and a plurality of slaves (cf. column 2, lines 15/16). Apart from this, the values indicated in *Bohrer* do not provide for the determination of the time interval's duration between the reception of the

electrical signals and the transmission of the amplified signals by the amplifier.

In Claim 9, the Examiner refers to a passage of *Lohr* that simply does not disclose this element, but simply states that, in addition to the transmission of energy, further information may be transmitted using a magnetic path of the inductive coupling element. This does not imply in any way that one of the “subscribers” of *Lohr* is arranged so that it can travel along the data line. In fact, it is quite clear from the figures of *Lohr* that a transmission of energy or data is only possible at exactly one relative position between the transmitter and the receiver, as it is shown for example in figure 2. No transmission of energy or data between the transmitter and the receiver, e.g., E1, is possible if the receiver E1 is removed from the position shown in figure 2. Moreover, it is not possible to exchange the positions of receivers E1 and E2, because then the resonance conditions would not be fulfilled. Thus, *Lohr*’s system is not capable of supporting a serial databus wherein one of the at least two subscribers is arranged so that it can travel along the data line.

And with regard to Claim 10, *Lohr* does not disclose any part that is arranged mobile relative to the other parts. The Examiner refers to a PC board containing conductor structures, as it is described by *Lohr* with reference to figure 3. But this is simply an embodiment in which in addition to an inductive coupling, a capacitive transmission is provided using the conductor structures 60, 61. None of these structures however, or cores 50, 51, is a mobile part.

Thus, Applicant submits that Claims 7, 9, and 10 are further neither anticipated, nor rendered obvious by the relied upon prior art references—alone or in combination.

CONCLUSION

Based on the above reasoning, Applicant submits that all pending claims are in condition for allowance, and as such, respectfully requests that all objections and rejections to the Application be removed and the Application be allowed to issue.

Applicant believes that no additional charges or fees are required with this communication; however, if any additional charges or fees must be paid in connection with the following communication, they may be paid out of our Deposit Account No. 50-0545.

Should the Examiner have any questions or comments regarding the above, a telephone call to the undersigned at (312) 226-1818 would be appreciated.

Respectfully submitted,

Dated: January 18, 2010

/Patrick J. Smith/
Patrick J. Smith, Reg. No. 65626
Attorney for Applicant